

USE YOUR IMAGINATION™

# Blue Book

EXAMINATION BOOK

Box No. \_\_\_\_\_

NAME Milam RDF

SUBJECT CAA Inspection

CLASS \_\_\_\_\_

SECTION \_\_\_\_\_

INSTRUCTOR \_\_\_\_\_

DATE 5/25/2016

8.5" x 7"      8 LEAVES | 16 PAGES

ROARING SPRING®  PAPER PRODUCTS  
ROARING SPRING, PA 16673

9:49 AM

High BTU plant  
2014

Don Seitz

Fugitive dust plan

Handle all LFG

2,700 scfm

Oct 2013 North Milam started

Generating plant using only natural  
gas

High BTU gas plant uses all natural  
gas

2 blowers for ~~North Milam~~  
1 for North

①

Vacuum 60-50"

After cooler to cool down

200 to ~~32~~ 83

Dehydration skid uses glycol  
to 34

Runs to sulfur treating (2 towers)

Sulfatreat activated Aluminum

8 months into process change-out

100-120 ppmv of S  $\rightarrow$  2-3 ppmv out of first

- Around ~~2-3~~ ppm O ppm to remove rest  
of test every other week

2 compressors parallel

3  $\rightarrow$  194 psig

(2)

J

After cooler ( $78^\circ$ )

3 filters

- large particles / moisture
- PSA - removes moisture & siloxanes, VOC, NMOC
- Activated carbon - final scrubber
  - ↳ remove any leftover

↓  
2 more filters

0.5 micron

↳

membrane → methane separates CO<sub>2</sub>

- 2 stages

- 1: removes most CO<sub>2</sub> & TO

1550 but set at 1640°

- 2: finalizes CO<sub>2</sub> removal +

uses purity valve

- goes to first stage compressor

Goes to

Goes to another skid ARI (Absorption Re却  
Incorporated) ③

- 4 upright towers to grab methane

\* activated alumina w/  
additive

Temperature differential shutoff  
in tanks from top & bottom

Pushes gas from bottom to let  
 $N_2$  &  $O_2$  from top &  
leaves high purity gas

Pumps send rest of gas to  
membrane on roof

- puts gas into ~~into~~ of  
bag based on lasers measuring  
size

(4)

Maintains certain pressure in bag & sends  
extra out

Pressure depends on what pipeline  
is

- + Now 254 psi does +2 psi  
to push into their pipeline
- $\geq 950 \text{ BTU}$  for pipeline
- Look @ Moisture  $5 \text{ lb/mm ft}^3$

Shuts off from ARI when not  
in spec

sends to open flame when  
not routed to ARI

Tianyang problems were mostly  
maintenance (planned maintenance)

2 weeks ago switched to natural  
gas

(3)

Would go down when gas to energy went down

TO only some of emissions  
- Test done ~month ago

One of a few

Testing every three months

Semi-annual testing

Performance testing

- Initial performance
- Another test done
- Within start-up 180 days

⑥

Subsequent

Renewable energy credits

On-top of Anacor pipeline

Switch to natural gas b/c  
dryer

7 day operation for 1 month  
of NG

Put in oxidation catalyst in  
gas to energy for CO  
- state wants to see

open flame - 3,000 scfm

Enclosed - 4,400

Thermal Ox -

Solar passive flares in North Milan

3 Solar powered flares to  
Spark ~~fire~~

open & enclosed are back-up

open has lower turn-down ratios

May have to send to flare

Total - 3,500 scfm

3,1800 scfm - max

1M scfm a year

800,000 scfm / yr

176 acres Milan

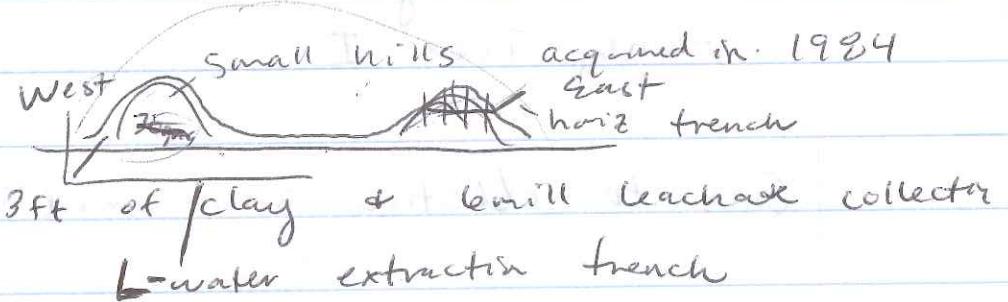
119 acres North Milan (40 acre constructed)  
= 13 acre cell last year

(8)

- ★ Design Plan
- ★ Initial Performance Test TDx
- ★ Initial Performance Test Enclosed

1960's first put in place

In-situ liner



> 20 mill Mg

Old  
MSW, construction, removed 0001

MSW, Demo & Construction (50% inert)

Little particle board or gypsum  
 $H_2S$  around 100-120

~100 wells - all active wells

Direct discharge to POTW

NMOC > SO Mg  
- only Tier I

Gas to electric since mid 90's

No odor complaints ever

26 wells w/ alternative

- 25% wells are hot

- All temp related (as high as  $53^\circ \rightarrow 155^\circ$ )  
Perf 20' down, use bentonite seal

(10)

Want to do wellhead monitoring  
2x a month w/ high BTU  
plant

Want to keep wellfield around  
53%

UVI for flame detection &  
thermocouple (redundant)

Quarterly basis, side slopes  
excluded

2/3 of lower ring closed

6' grading layer (soil)

1' clay

40 mil textured HPE

3' soil & vegetated

(11)

No monitoring exceedances  
- walk serpentine path

No ~~steep~~ monitoring slopes  
- 4:1 slopes  
- been in for a long time

2019-2020 for closure

Added wells just for <sup>more</sup> gas  
Control

70 some wells originally

Fall 2014 Last several years

⑫

Stone columns & rock columns -  
fill bottom half w/ coarse slate,  
less settling

Some wells w/ water &  
others dry

Volume of gas in areas

- stare column wells on  
west side
- monitor well flow

Monthly cover integrity inspection

- any erosion

11:40 AM

Perimeter gas probes

- never seen any exceedances

Ambient air monitors

- never see anything

(13)

Monthly gas probe monitoring

Garbage off-site by Milam  
- dump sites around the site

Use dirt externally and tarps internally to remove

Peak elevation

Ground - 410

Tip - 630

1-2' soil

Leachate sent directly to POTW  
~ storage tank as back-up

(14)

Water truck on a daily during  
hot season

Deviations of plant + fine  
dawn

- program for → put in just  
last week

Final covered multiple years ago

NG from same pipeline

Garrett

SS-60" Vacuum

Blane

5-7.5 psi



180 psi 2 compressors (1@ a time)  
determine on flow

(15)

Sulfur removal on outside

ARI able to handle all  
flow

Now

Pipeline pressure 256 psig

Testing gas in carb on  
treating, 7x week

TOx Runs about 1640

Reatt temp : 1620-1640

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